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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,179	06/07/2001	Etsuo Ogino	WATA:012	5855

7590 02/21/2003  
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EXAMINER

NGUYEN, THANH T

ART UNIT	PAPER NUMBER
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2813

DATE MAILED: 02/21/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/876,179

Applicant(s)

OGINO ET AL.

Examiner

Thanh T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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## **DETAILED ACTION**

### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119

(a)-(d). The certified copy has been received.

### ***Oath/Declaration***

Oath/Declaration filed on 10/5/01 has been considered.

### ***Claim Rejections - 35 USC § 112***

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation "a refractive index of not more than 1.5 at the wavelength of 550 nm" in lines 6-7 renders the claim indefinite because "not more than" is a negative limitation. It is suggested to change to "a refractive index less than or equal to 1.5 at the wavelength of 550 nm".

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouderkirk et al. (U.S. Patent No. 6,262,842) in view of Kamiya (U.S. Patent No. 6,317,179).

Ouderkirk et al. teaches a substrate for a reflection type liquid crystal display element comprising:

A transparent substrate, and a reflective mirror formed on top of the transparent substrate, wherein the reflective mirror (see figure 2b) comprises a predetermined number of high refractive index first transparent film and low-refractive-index second transparent films laminated alternately on the transparent substrate (see col. 4, lines 64-67), and wherein either or both of the first transparent films and the second transparent films are arranged such that a thickness thereof increases progressively or decreases progressively with distance from the transparent substrate (see col. 11, lines 1-14).

However, Ouderkirk et al. does not teach the first refractive film  $\text{TiO}_2$  which has the refractive index of at least 1.8 at a wavelength of 550nm the second refractive film  $\text{SiO}_2$  which has the refractive index of less than 1.5 at the wavelength of 550nm.

Kamiya teaches a method of forming a transparent substrate (1) and a reflective mirror (10/20/30) on top of the transparent substrate, wherein the reflective mirror (10/20/30) comprises a high refractive index first transparent film ( $\text{TiO}_2$ ) and low refractive index second transparent films ( $\text{SiO}_2$ ).

Therefore, it would have been obvious to a person of ordinary skill in the requisite art at the time of the invention was made would form the first refractive film  $\text{TiO}_2$  which has the refractive index of at least 1.8 at a wavelength of 550nm the second refractive film  $\text{SiO}_2$  which has the refractive index of less than 1.5 at the wavelength of 550nm in process or Ouderkirk et al.

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as taught by Kamiya because the process would provide highly accurate images and it is also known in the LCD processing art that determining the optimum material for the layer only involved routine skill in the art.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Nguyen whose telephone number is (703) 308-9439, or by Email via address Thanh.Nguyen@uspto.gov. The examiner can normally be reached on Monday-Thursday from 7:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, can be reached on (703) 308-4940. The fax phone number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956 (See **MPEP 203.08**).



Thanh Nguyen  
Patent Examiner  
Patent Examining Group 2800

TTN